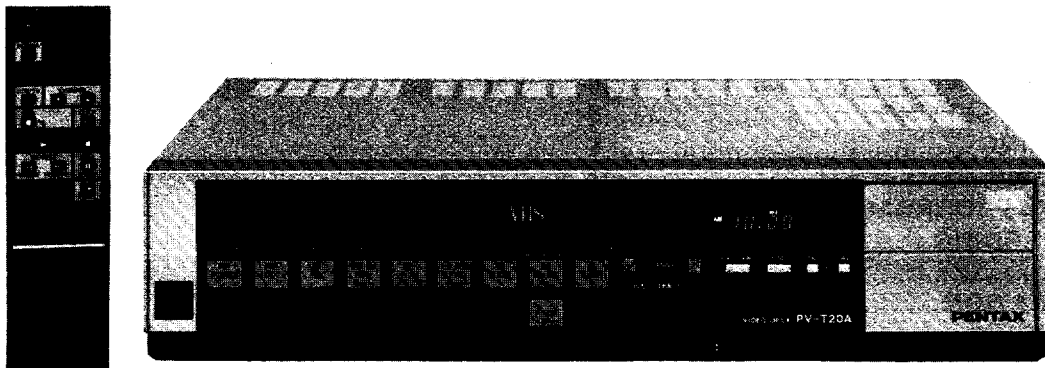


# PENTAX

VHS VIDEO DECK

## MODEL PV-T20A

### INSTRUCTION MANUAL



## CONGRATULATIONS

You are now the proud owner of a Pentax VTR. Please read this instruction manual carefully before use and refer to it if any difficulties arise.

## FEATURES

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- Programmable channel memory with voltage synthesized tuner
- Setting 4 programs/2 week is possible with built-in programmable timer
- Tuning ability for cable systems channel A-2, A-1 and A through W
- Instant recording timer
- Remote control operation
- Maximum 8 hours recording/playback
- Front loading mechanism
- Automatic rewind
- Soft touch control with microprocessor
- Visual search
- Rewind shut-off

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## FOR YOUR SAFETY

### Power supply: AC 120V, 60 Hz only

The POWER switch located on the front panel of the VTR switches the VTR to on and off, leaving the clock/timer facility unaffected.

If the unit is to be left unattended for a long period and it is not intended to use the timer recording function, it is recommended that the unit be completely switched off and the plug removed. If you intend to record during your absence, remember there is no necessity for the TV receiver to be switched on.

Illustrated below is the label on the back of your unit.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK).  
NO USER—SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

### WARNING:

Many television programs are copyrighted. One court has held that private, non-commercial, in-home video taping of copyrighted televised programs constitutes copyright infringement. Purchasers are advised not to copy such programs.

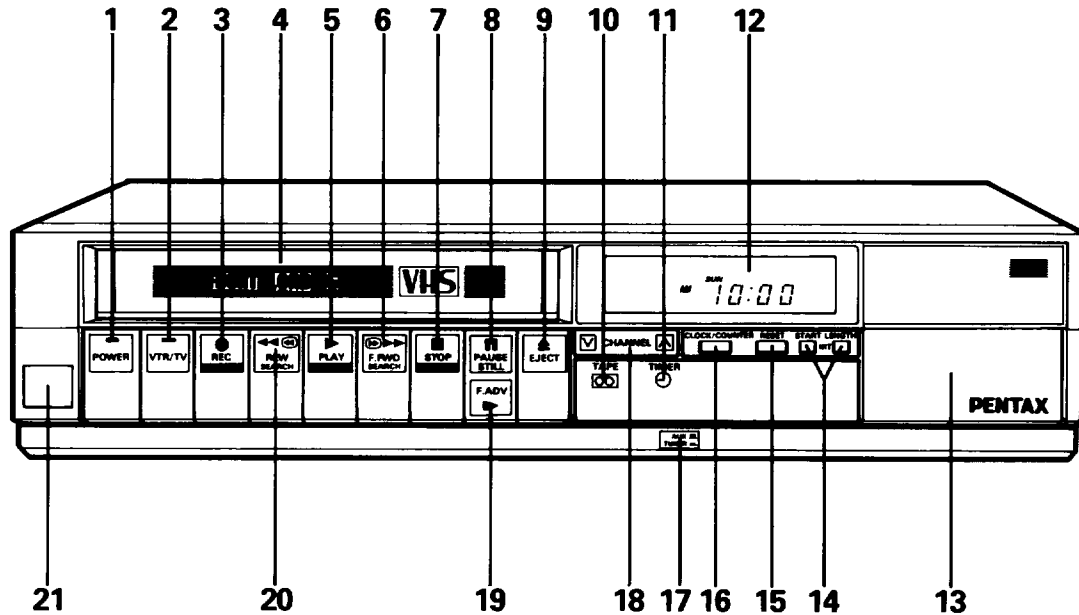
**WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### Moisture condensation

If you pour a cold liquid into a glass, water vapor in the air will condense on the surface of the glass. This is moisture condensation.

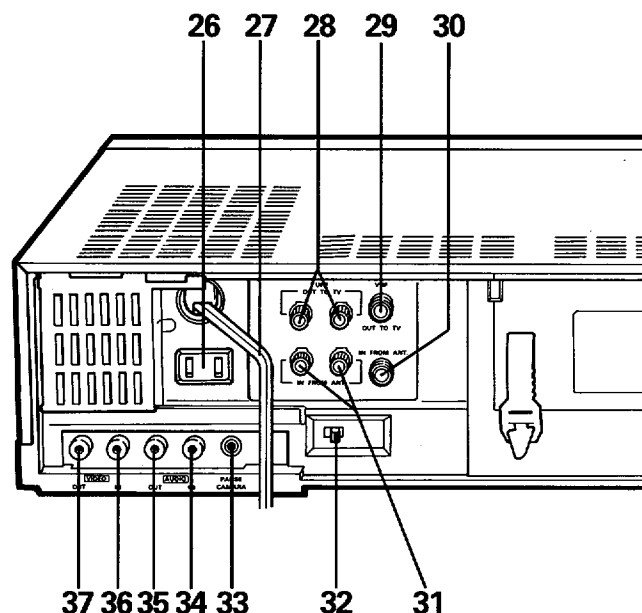
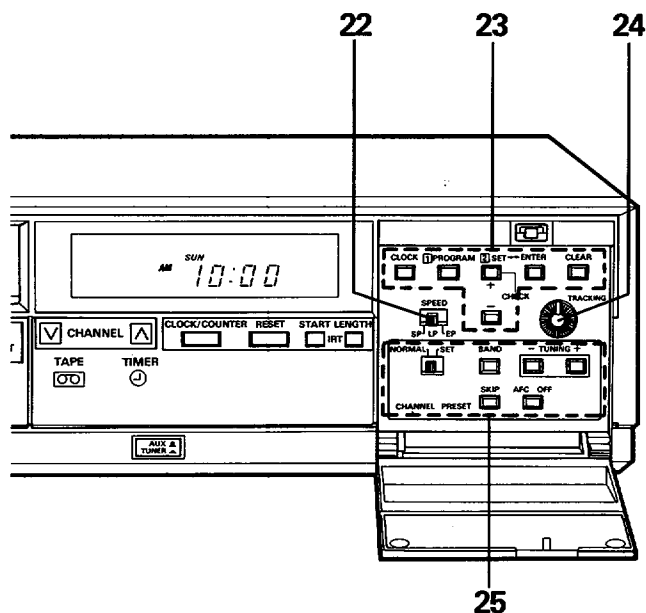
Moisture condensation on the head drum, one of the most crucial parts of the Deck, will cause damage to the tape. The Deck has a condensation eliminator built in. When the Deck is exposed to a rapid temperature change from cold to warm, some condensation will occur. When moisture is present, turn power off and allow at least 2 hours for the Deck to dry out.

# CONTROLS AND FEATURES



- 1. POWER SWITCH**  
Turn system power on and off.
- 2. VTR/TV SELECT SWITCH**  
Selects the signal to be viewed.  
The VTR indicator comes on when the unit is in VTR mode and the signal received by the VTR is displayed on the TV screen. With the switch in the TV position (indicator light off) the broadcast signal is received directly by your TV set. When the VTR power is turned off, the VTR automatically switches to "TV".
- 3. RECORD BUTTON**  
Press RECORD button and while holding RECORD, press PLAY button to record.
- 4. CASSETTE COMPARTMENT**
- 5. PLAY BUTTON**  
Press to start play.
- 6. FAST FORWARD/VISUAL SEARCH BUTTON**  
Press to activate fast forward.  
Press this button during playback of a recorded tape, and forward playback picture at high speed can be seen.
- 7. STOP BUTTON**  
Press to stop tape. The STOP button must be pressed between "RECORD" and any other operation.
- 8. PAUSE/STILL BUTTON**  
Press to pause during recording or playback.
- 9. EJECT BUTTON**  
With power on, press to remove cassette.
- 10. TAPE-IN INDICATOR**  
Lights when cassette is located in the compartment.
- 11. TIMER INDICATOR**  
Will light when turning power off after programming.
- 12. ELECTRONIC DIGITAL DISPLAY**  
This display is used as an indicator for the present time of day, channel number, tape counter, timer programming and instant recording.
- 13. DOOR FOR SECONDARY CONTROLS**
- 14. INSTANT RECORDING TIMER BUTTONS (IRT)**  
IRT allows unattended recording without programming the timer. See page 12 for details.
- 15. COUNTER RESET BUTTON**  
To reset counter to "0000".
- 16. CLOCK/COUNTER SELECT BUTTON**  
Press to select clock display or counter display.
- 17. AUX/TUNER SELECT SWITCH**  
In the TUNER position the VTR will record programs using the built-in tuner. In the AUX position the VTR will record from a camera or component system via the VIDEO IN and AUDIO IN jacks located on the back of the VTR.
- 18. CHANNEL SELECT BUTTONS**  
Select the channels you wish to view or to record by pressing these buttons.
- 19. FRAME ADVANCE BUTTON**  
Press in the play-pause mode to view one frame at a time.
- 20. REWIND/VISUAL SEARCH BUTTON**  
Press to start rewind.  
Press this button during playback of a recorded tape, and reverse playback picture at high speed can be seen.
- 21. REMOTE CONTROL RECEIVER**  
Point the Infrared Transmitter of the supplied Remote Control Unit here.

# CONTROLS AND FEATURES



## 22. TAPE SPEED SELECT SWITCH

Recording time using Cassette tape T-160:

EP: 8 hours

LP: 5.3 hours

SP: 2.6 hours

**Note:** Playback speed automatically corresponds with recorded speed.

## 23. TIMER CONTROLS

### 24. TRACKING CONTROL KNOB

To minimize noise in playback.

### 25. CHANNEL PROGRAMMING CONTROLS

Program channels for channel up and down selection with these controls.

## 26. AC OUTLET

Connect another electrical unit. (maximum 300W)

## 27. POWER CORD

Connect to a 120V AC outlet.

## 28. UHF ANTENNA OUTPUT

Connect these terminals to the UHF antenna terminals on the back of the TV.

## 29. VHF ANTENNA OUTPUT

Connect this terminal to the VHF antenna terminal on the back of the TV.

## 30. VHF ANTENNA INPUT

Connect the VHF antenna to this terminal.

## 31. UHF ANTENNA INPUT

Connect the UHF antenna to these terminals.

## 32. RF CONVERTER SWITCH

Set this switch to whichever channel (CH3 or CH4) is unused in your area.

## 33. CAMERA PAUSE JACK

Connect Camera Pause cable.

## 34. AUDIO IN

Receives audio signals from a camera or from another VTR.

## 35. AUDIO OUT

For a connection to a monitor or another VTR.

## 36. VIDEO IN

Receives video signal from a video camera or another VTR.

## 37. VIDEO OUT

For connection to monitor TV.

# INSTALLATION

## ANTENNA CONNECTION

There are 2 types of TV broadcasts, VHF and UHF. There are areas where ① only VHF TV broadcasts can be received, ② only UHF TV broadcast can be received and ③ both VHF and UHF TV broadcasts can be received.

There are various types of antenna hook-ups. Use the correct one, referring to the following diagrams. At first, in order to connect your VTR to your TV for recording and playback, it will be necessary to attach the antenna to your VTR. Then you must connect your VTR to your Television. Your VTR comes with the necessary connectors and adapters for most types of VTR installation.

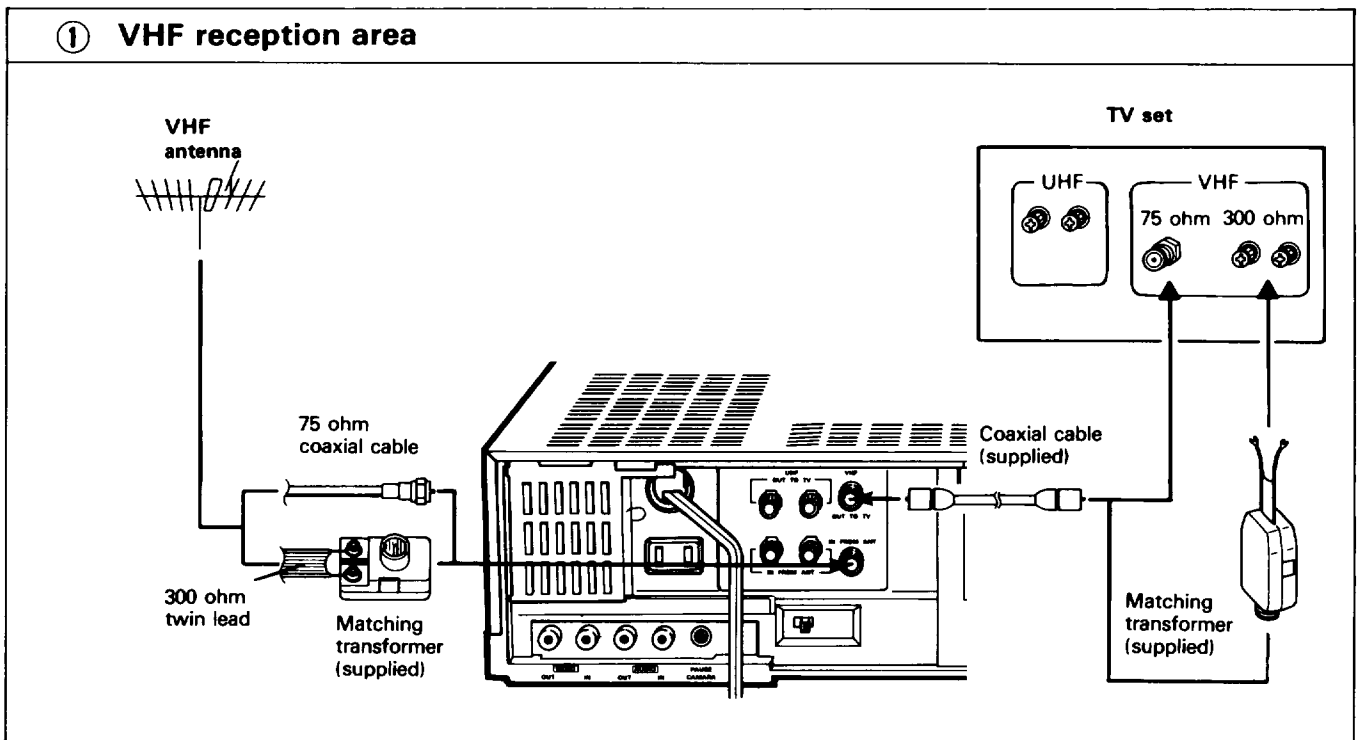
If your television is used on a cable system, special installation procedures may be required. We suggest you contact your dealer or cable company for assistance. Installation is not covered by the Limited Warranty.

**“Note to CATV system installer:** This reminder is provided to call the CATV system installer’s attention to Article 820 – 22 of the NEC that provides guide lines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical”.

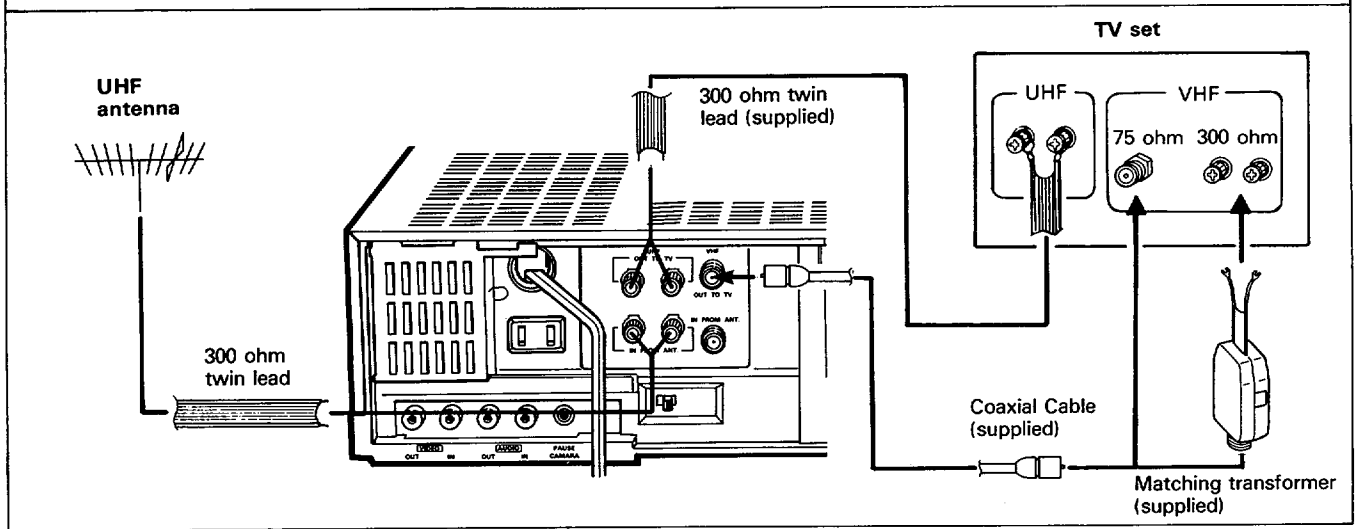
If you want to attach your VTR to a Portable TV with “rabbit ears” (dipole antenna), you must disconnect the “rabbit ear” leads from the antenna input terminal of the TV. It will be necessary to extend these leads so they can be attached to your VTR. We recommend an outside antenna.

## Precaution

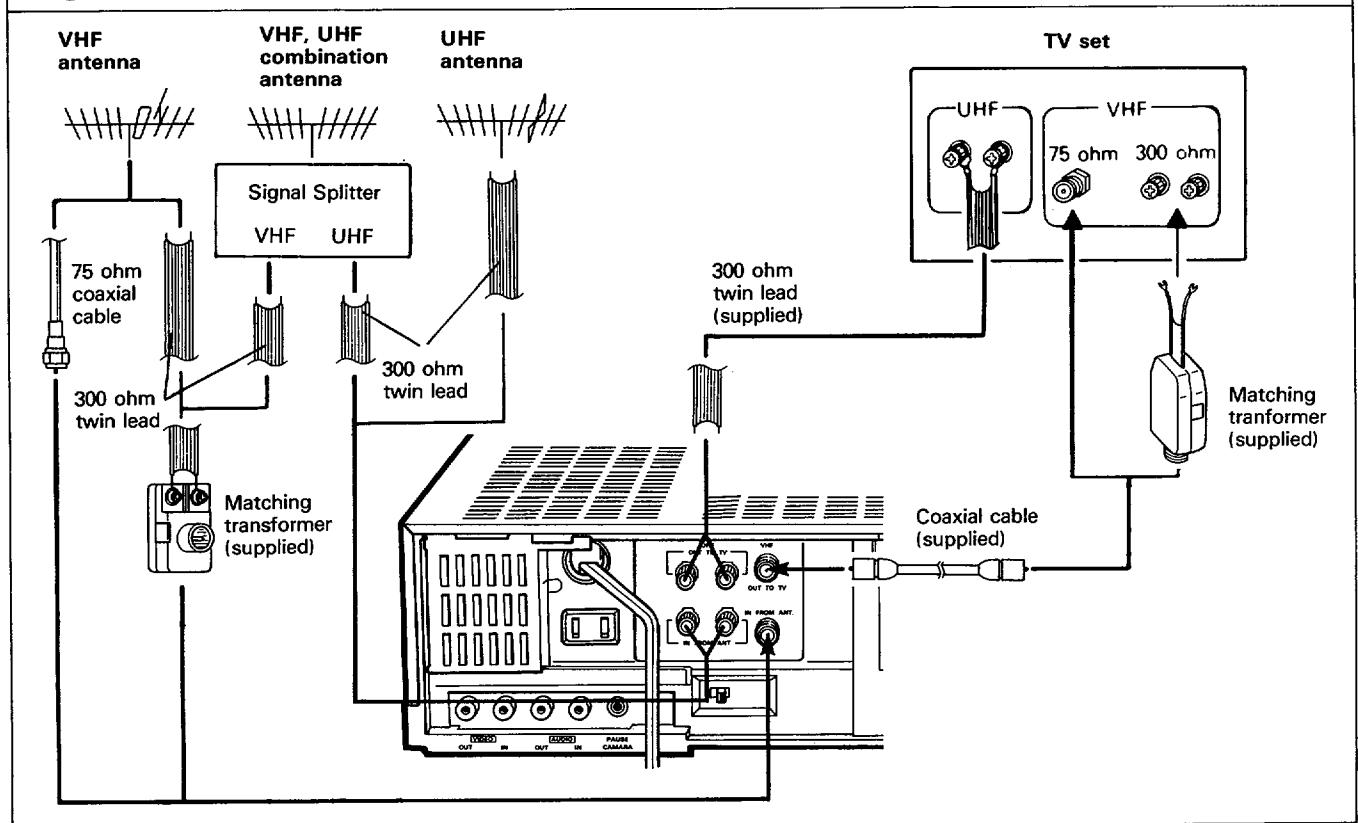
- The VTR is designed for use in horizontal position only.
- Avoid extreme heat, cold, moisture and dust.
- Avoid use near magnetic field and places subject to strong vibrations.
- Do not insert wires, etc. through the cassette holder.
- Do not move the unit from a hot place to a cold place or vice versa.
- Be careful; when the surface of the case is wiped with a volatile agent such as benzine, alcohol, thinner, etc., or a chemically processed cloth, the surface finish may deteriorate or its coating may peel.
- Allow for air circulation at bottom, top and back of unit.



## ② UHF reception area

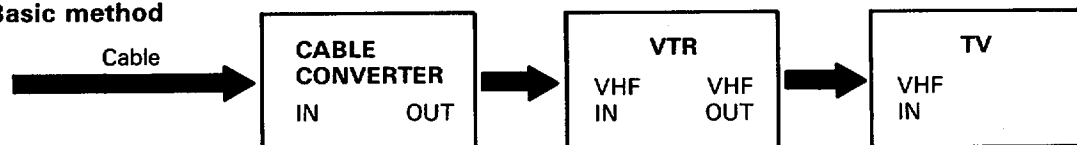


## ③ Both VHF and UHF reception area



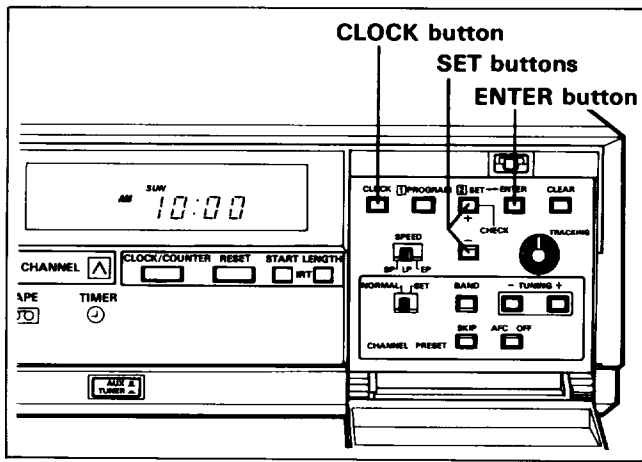
## Cable system connection

### Basic method



Note: With this connection you can only watch and record the same program. The cable converter must be turned on for recording. Other connections are possible but may require additional antenna accessories which are not supplied. Cable ready VTR models can be used with this connection, but for maximum flexibility of use, additional accessories are required.

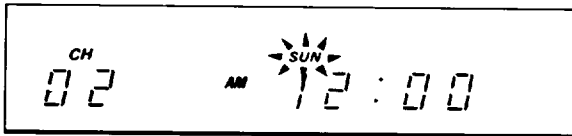
## CLOCK TIME SETTING



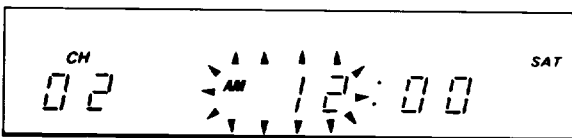
- When VTR is plugged into an AC outlet for first time, the clock display shows "--:--".

The clock is set using the CLOCK, SET and ENTER buttons. The CLOCK button selects the clock setting mode. The SET buttons advance the Day, Hours or Minutes. The ENTER button stores the Day, Hours or Minutes. After the Day is entered with ENTER, the next press of the ENTER button will enter the hours, and next press will enter the minutes. To indicate the "DAY" mode, the day will flash. To indicate the "HOUR" mode, the hours digits will flash. To indicate the "MINUTE" mode, the minutes digits will flash. When the ENTER button is pressed, the flashing digits will be stored in memory.

1. Press VCR power on.
2. Press and hold the CLOCK button while performing steps 3 through 5.

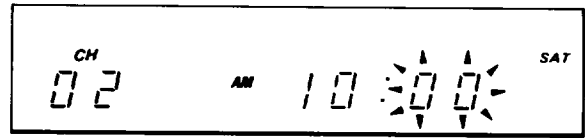


3. Press the SET button (+ or -) repeatedly to select the present day of the week. Hold the button down to advance rapidly. When the present day of the week appears, press the ENTER button.



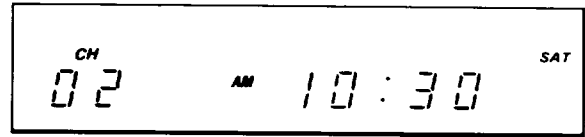
For example, the diagram shows that Saturday (SAT) has been set.

4. Press the SET button (+ or -) to set the present hour. Hold the button down to advance rapidly. Press the ENTER button when the present hour appears.



For example, the diagram shows that "AM 10" hour has been set.

5. Press the SET button (+ or -) to set the minute. Hold the button down to advance rapidly. Press the ENTER button when the present minute appears.



For example, the diagram shows that "30" minutes has been set.

6. Release the CLOCK button.

Now the clock has been set to the correct time of day.

For zero second setting, set the minutes to one minute ahead of present time and release the CLOCK button when the next minute exactly starts.

**Note:** • If your clock display shows "--:--", your home had a power failure. The time should be reset.

- 12:00 AM is midnight; 12:00 PM is noon.

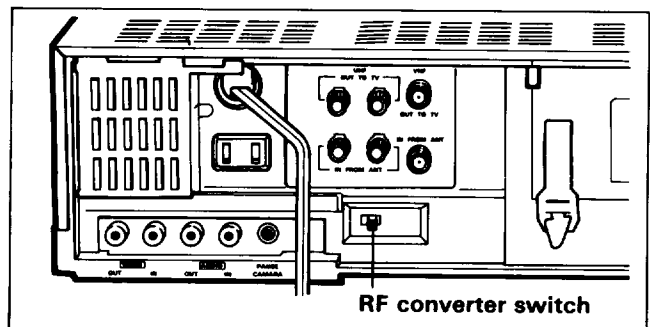
## NORMAL TV VIEWING

You do not need to disconnect VTR from your TV set to watch TV. When you turn off the POWER switch on your VTR, the VTR automatically switches to "TV".

To watch TV, turn on TV and select a channel as usual.

## VIDEO CHANNEL SETTING

The RF converter changes the video and audio signals from the tuner or tape playback, to a standard television broadcast signal on channel 3 or 4. To obtain video recorder output on either channel 3 or 4, set the RF converter switch to CH 3 or 4 whichever channel is unused in your area.

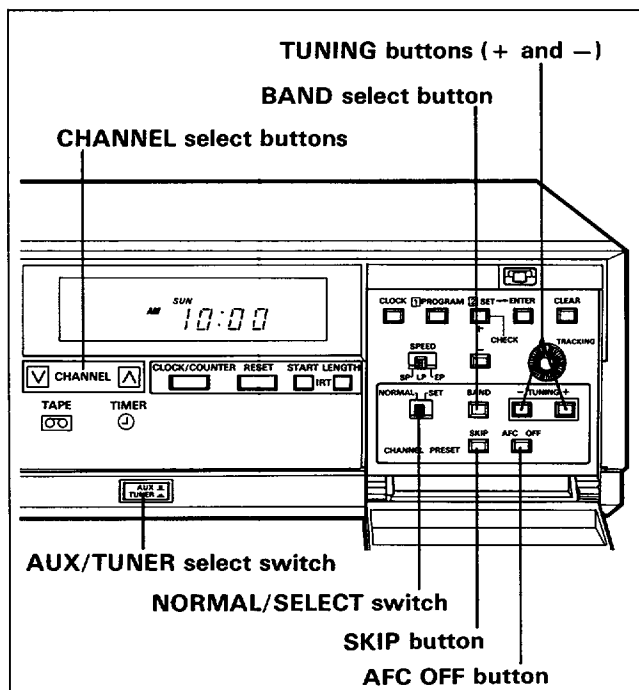




## CHANNEL TUNING

Your VTR can be preset up to 80 memorized channels. It has been preset to receive VHF channels 2 through 13 when shipped. The channel number in the display will originally match the actual TV channel selected. During the procedure which follows, you can reprogram any display channel number, so that it selects any actual TV channel. This means that after programming of the memorized channels, the display can indicate a different number than the actual TV channel tuned by that channel memory position.

You can set any channel memory position to receive any station. This ability is most useful when the tuner is used in CATV installations. To add UHF or CATV channels not factory preset, or to preset the VHF channels in some other order, use the procedure which follows.



1. Set the clock to the correct time. (See page 8)
2. Turn on TV and VTR.
3. Set the TV to Channel 3 (or 4) (for your video channel).
4. Open the door for secondary controls.
5. Set the AUX/TUNER select switch to "TUNER".
6. Set the NORMAL/SELECT switch to "SELECT". Time indication will change to band indication.
7. Select the channel number to be memorized by pressing the CHANNEL select buttons.

**Note:**

1. Your VTR can use the following numbers as TV channel presets: 00, 01 through 72, 91, 92, 95 through 99.

2. Your VTR has been preset to receive VHF channels 2 through 13.
3. You should determine which channel memory positions have not been preset before entering programming information. New information automatically erases previous programmed data.
8. Press the BAND select button to select either "L", "H" or "U" according to the channel number as listed below.

Indication on display	Channels to be received
L	VHF low channels 2~6
H	CATV channels A-2, A-1 and A~1 VHF high channels 7~13 CATV channels J~W
U	UHF channels 14~83

For example, if you're going to tune one of UHF channels 14 through 83, display the letter "U" by pressing the BAND select button.

9. Press and hold the TUNING button (+) until the picture for the channel number you are programming appears on the TV screen. (For fine tuning tap on (+) and (-) TUNING buttons alternately.) The active channel with the lowest frequency in the band will first appear, followed in sequence by the other active channels, as in the "Channel frequency spectrum" on next page.

**Note:**

1. Holding down the TUNING button (+) at the end of band will result in tuning into the next band. The band display will change to the next higher band.
2. If you press the TUNING button (-) at first, the band will change to adjacent band immediately. The active channel with the highest frequency in the band will first appear, followed in opposite sequence by the other active channels.
3. Speeds of picture scanning from the lowest channel to the highest in each band are as follows;

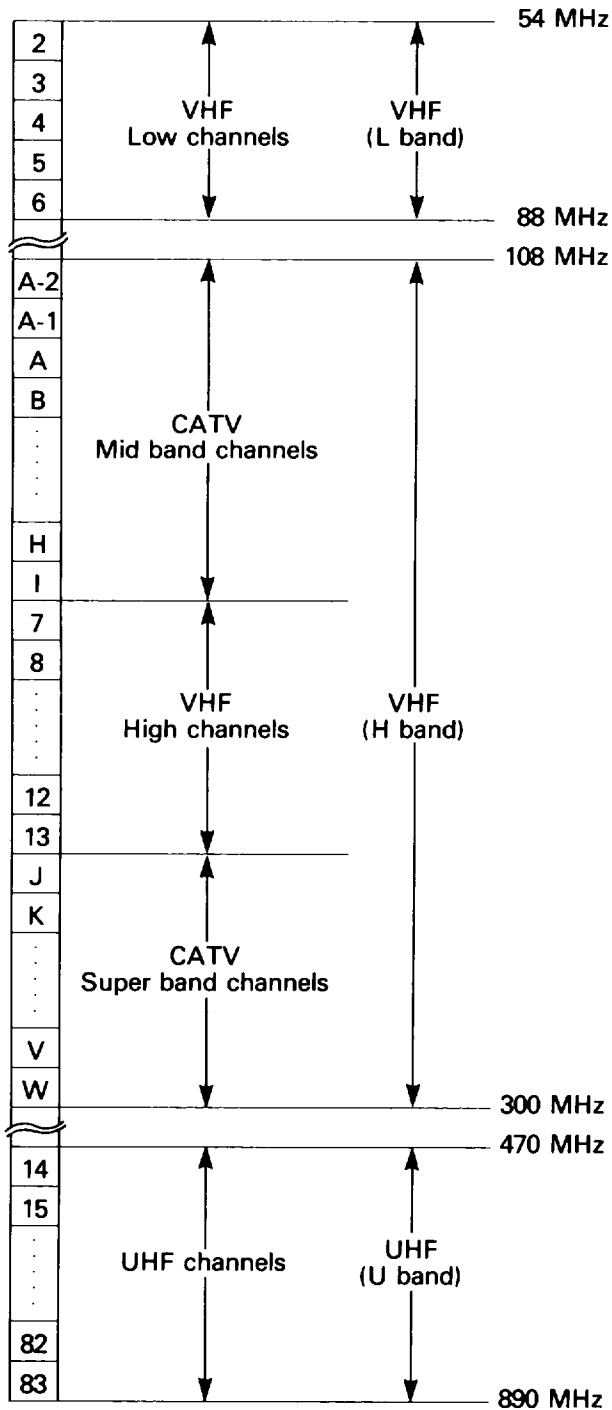
Band	Speeds
L	About 20 seconds
H	About 40 seconds
U	About 80 seconds

10. After releasing the TUNING button when the channel picture appears for the channel number you are programming, press the up (+) and down (-) TUNING buttons to fine tune the TV channel.
11. Repeat steps 7 through 10 for other channel.
12. Return the NORMAL/SELECT switch to "NORMAL".

- To check programming, press the CHANNEL select buttons to cycle the VTR tuner through all the channels you have programmed. If a channel was missed or requires fine tuning, repeat above steps for the channel involved.

**Always return the NORMAL/SELECT switch to "NORMAL" after preprogramming is complete.**

### Channel frequency spectrum



### AFC (Automatic Frequency Control)

A channel is fine tuned using up (+) and down (-) TUNING buttons. When the NORMAL/SELECT switch is returned to "NORMAL", AFC is turned on and the channel "locks in". The AFC electronically optimizes the fine tuning adjustment.

If a TV channel signal is marginal due to graininess or ghosting, the picture may sometimes be improved by manually tuning for best picture and then defeating the AFC action. To turn AFC off, follow the procedure below.

#### AFC off tuning procedure

- Set the NORMAL/SELECT switch to "SELECT".
- Select the desired channel on which to disable AFC OFF by pressing CHANNEL select button.
- Press the AFC OFF button.

"AFC" indication will disappear from the display.

**Note:** Pressing the Button once again will turn AFC on.

- Return the NORMAL/SELECT switch to "NORMAL".

**Note:** The AFC is only switched off for the channel you have been programming. AFC remains in effect on all other channels. To defeat the AFC for additional channels, repeat the above steps.

#### Eliminating unwanted preset channels

You can rearrange the desired channels by eliminating unwanted preset channels for channel up/down selection.

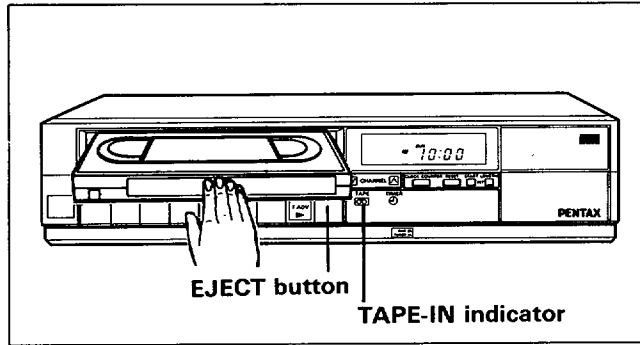
- Press the CHANNEL select buttons until an unwanted channel is turned.
  - Set the NORMAL/SELECT switch to "SELECT".
  - Press SKIP button.
- Sound will go off indicating the channel has been erased from memory.
- Repeat steps 1 through 3 until all unwanted channels have been eliminated.
  - Return the NORMAL/SELECT switch to "NORMAL".

Channels which have been eliminated cannot be selected by the CHANNEL select buttons.

**Note:** To restore the erased channel, repeat the above steps 1 through 3.

## CASSETTE TAPES

### Insertion and removal of cassettes



Before inserting or removing cassette, be sure to turn the POWER switch on.

**Note:** TAPE-IN indicator lights when cassette is inserted in the compartment.

#### Insertion

1. Insert the cassette.

#### Removal

1. Press EJECT button.
2. Remove the cassette.

#### Types of video cassette

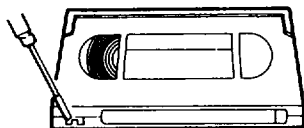
Use video cassettes with the **VHS** mark in this VTR. The table below shows how to distinguish difference in recording time of cassettes.

TYPES	RECORDING TIME		
	SP	LP	EP
T-30	30 min.	60 min.	90 min.
T-60	60 min.	120 min.	180 min.
T-120	120 min.	240 min.	360 min.
T-160	160 min.	320 min.	480 min.

It is recommended that the SPEED select switch of the VTR is set to "SP" to obtain better picture and sound quality when recording a music program.

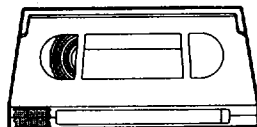
#### To avoid erasing a recording

Break off the safety tab using a screwdriver or similar tool.



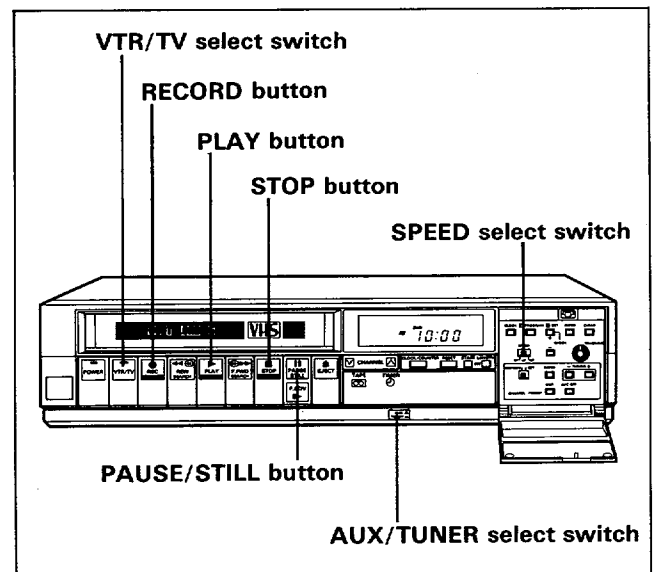
#### To re-record on a cassette which has its safety tab removed

Cover the hole with cellophane tape.



Refer to the instructions included with cassettes for more information.

## RECORDING TV PROGRAMS



1. Turn on VTR power. If you wish to view a program being recorded, turn on TV and select the channel 3 or 4 for your video channel.
  2. Insert Cassette.  
Be sure to check that the record safety tab is not missing.
  3. Set SPEED select switch to "SP", "LP" or "EP".  
It is recommended to set this switch to "SP" when recording a music program.
  4. Set the AUX/TUNER select switch to "TUNER".
  5. Set the VTR/TV select switch to "VTR" (VTR indicator lights).
  6. Select channel to be recorded.
  7. Press RECORD button and while holding RECORD, press PLAY button.
  8. Press PAUSE/STILL button to stop recording temporarily. Press again to release.
- Note:** To prevent tape damage, do not leave the unit in the pause mode for more than 5 minutes.
9. Press STOP button to stop recording.

#### To record one program while viewing another

You can record one program while viewing another by merely selecting the channel with your TV channel button after setting the VTR/TV select switch to "TV". The recorded program can be viewed later at your convenience.

#### To change the channel to be recorded while in record mode

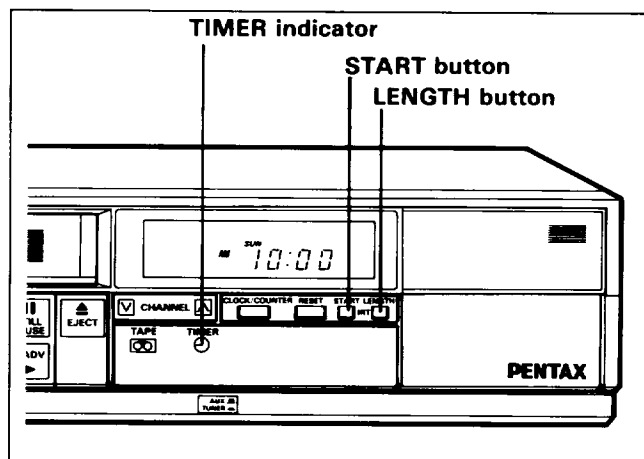
During recording, the channel lock function operates and channel cannot be changed if the channel select button is pressed.

If you wish to change channel, proceed as follows.

1. Press the PAUSE/STILL button.
2. Change channel desired.
3. Press the PAUSE/STILL button to release record pause mode.

## INSTANT RECORDING

Instant recording timer (IRT) allows you to start an unattended recording without programming the timer. It is convenient if you are interrupted while viewing a program and want to record the balance of it. By using the delayed start feature you can delay the recording start up to 24 hours. Although you do not need to program the timer for IRT, the clock must be set.



### IRT with immediate start

1. Follow the steps 1 through 6 on "RECORDING TV PROGRAM".
2. Press the LENGTH button to select the recording time. Pressing the button once sets the timer to "0:00". The recording time changes in hour and minute in the order of 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed. The TIMER indicator will come on, and IRT will begin when 0:30 is displayed. During recording, the remaining IRT time appears on the timer display.
3. At the end of recording the display reads 0:00; the VTR will automatically shut off.

#### Note:

1. IRT feature does not operate during play and unattended recording modes.
2. If the LENGTH button is pressed during rewind operation, VTR enters the IRT mode after rewinding tape.

### Delayed start IRT

You can delay the start of an IRT by using the START button.

1. Follow the steps 1 through 6 on "RECORDING TV PROGRAM".
2. Press the START button to set the start time. The start time may be set to begin on any hour or half hour, up to 24 hours from present. For example, the present time is 9:15 and you want to record a program that starts at 10:30. Just press the START button three times.

3. Press the LENGTH button repeatedly to select the desired recording time. The recording time changes in hour and minute in the order of 0:30, 1:00, 1:30, 2:00, 3:00 and 4:00 every time the button is pressed.
4. Turn off the VCR power.

The TIMER indicator will come on, and IRT will begin at the time you selected.

During recording, the remaining IRT time appears on the timer display.

**Note:** Delayed IRT will not begin if the VTR is turned on at the start time.

### Recalling the IRT

Press the START or LENGTH button only once to recall the start time or recording time respectively. The display shows start time or recording time for about 8 seconds and returns to present time of day or counter reading.

**Note:** To recall the recording time, press the LENGTH button only once. If you press the button twice or more, the recording time will be changed.

### To extend the recording time

The recording time can be extended anytime by pressing the LENGTH button. The timer display will reset to 0:30, 1:00, 1:30, 2:00, 3:00 or 4:00 as selected.

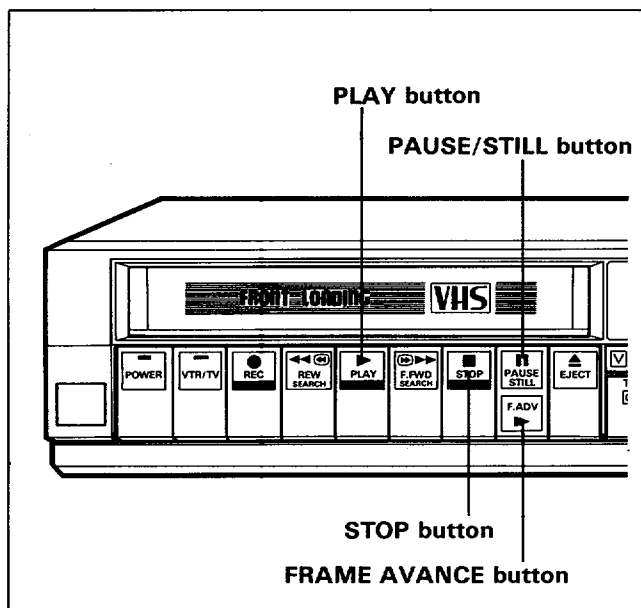
### To cancel IRT

You can clear IRT by pressing the LENGTH button until the recording time is reset to 0:00, or by pressing the POWER button and then the STOP button within 10 seconds.

#### Note:

1. When the recording is not taking place, press the LENGTH button until the display reads 0:00 to cancel IRT.
2. The presetting of IRT is not possible when the previous information is still stored.

## PLAYBACK



1. Turn the POWER switch on.
2. Turn the TV set on and select the video channel.
3. Insert the cassette.
4. Press the PLAY button.
5. Press the STOP button to stop playback.

### Still playback

Press the PAUSE/STILL button to stop the picture on the screen during playback.

During still playback, press the PAUSE/STILL button to return to normal playback, or the STOP button to stop the tape.

#### Note:

- If you see vertical shaking on the TV screen in the still playback mode, rotate the V. LOCK control on the bottom of the video deck using a small screwdriver to minimize shaking.
- When the still playback mode continues for about 5 minutes, the video deck switches to the stop mode automatically to prevent damage to the tape.
- During still playback picture of an EP recordings, the noise bands are eliminated automatically. However, if some are not eliminated, the FRAME ADVANCE button can be tapped to remove them off screen.
- During still playback of an SP recording, the FRAME ADVANCE button can also be tapped to eliminate noise bands.
- The still playback of an LP recordings will contain too much noise to produce a viewable picture. Tapping the FRAME ADVANCE button has no effect for eliminating this noise.

### To view frame-by-frame picture

The frame-by-frame picture can be viewed by pressing the FRAME ADVANCE button during the still playback mode. If you keep in the depressed position, frames are advanced continuously as in slow motion.

### Visual search

This allows you to view the picture from a recorded tape at high speed in both the forward and reverse directions.

Press the PLAY button to play a tape, then press either the VISUAL SEARCH button REW or F.FWD. Pictures can be viewed at high speed in either the forward or reverse direction.

**Note:** Tapes recorded in SP or LP will have wider noise bars than tapes recorded in EP mode. This is normal.

### Automatic rewind

The tape will stop and automatically rewind when the tape comes to an end.

This function does not operate during Timer recording and Instant recording.

### Rewind shut off

If power is turned off during rewind operation, power will be turned off automatically after the tape has been completely rewound.

### Tape counter

This indicates the amount of video tape transported as a number.

Press the CLOCK/COUNTER select button to indicate the counter reading on the display. Then press the RESET button to set the counter reading to "0000" when starting recording or playing back.

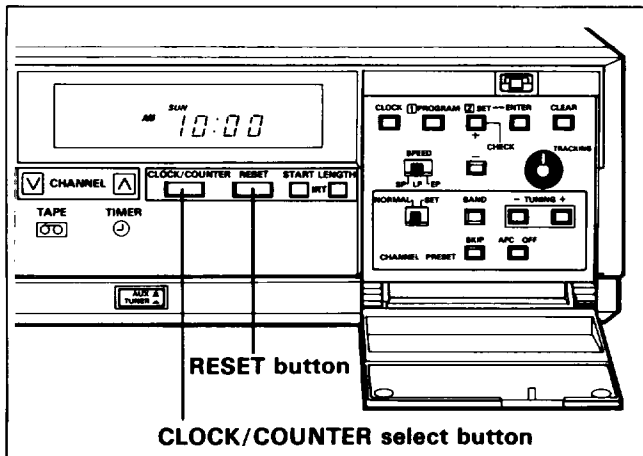
Note the number on the Tape counter at the beginning and end of each program you record. This will allow you to use the counter to find the desired program later.

### Tracking control adjustment

When playing prerecorded tapes or those recorded on units other than you own, black and white streaks may appear on your TV screen. If this occurs, turn the TRACKING control slowly in either direction until the streaks disappear. When playback of this particular tape is over, readjust the TRACKING control to its original position. The original position is normally in the center position.

### Counter memory function

This is useful if there is a section of tape you want to view immediately after recording or you want to return to the same point several times.



1. Press the CLOCK/COUNTER select button and indicate the counter reading.
2. Begin recording or playing back a tape.
3. At the point where you want playback to begin, reset the tape counter to "0000" by pressing the RESET button.
4. Continue to play or record.
5. Press the STOP button when recording or playback finishes.
6. Press the REWIND button.

The tape will automatically stop at the pre-selected "0000" position.

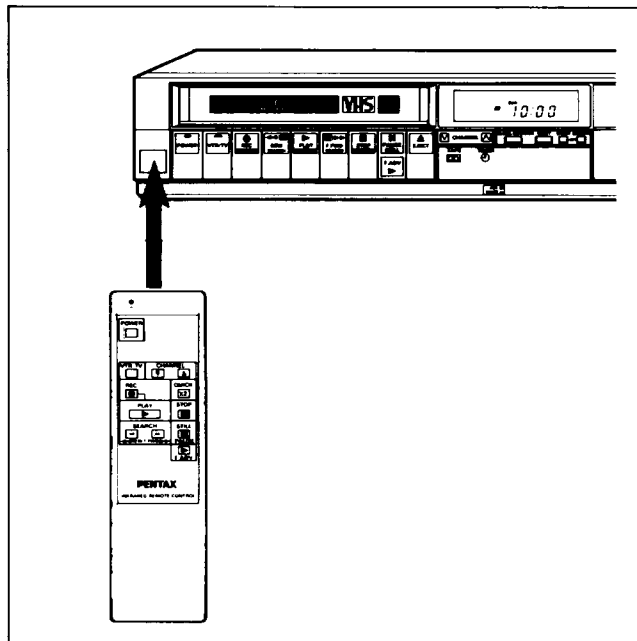
Actually the tape will stop slightly prior to "0000" at approximately the "9997" position to avoid missing the very first part of the program.

**Note:** With CLOCK/COUNTER select button in "CLOCK", counter memory will not operate.

## REMOTE OPERATION

A provided Remote Control Unit allows you to control 15 functions on your VTR from your chair or other remote location.

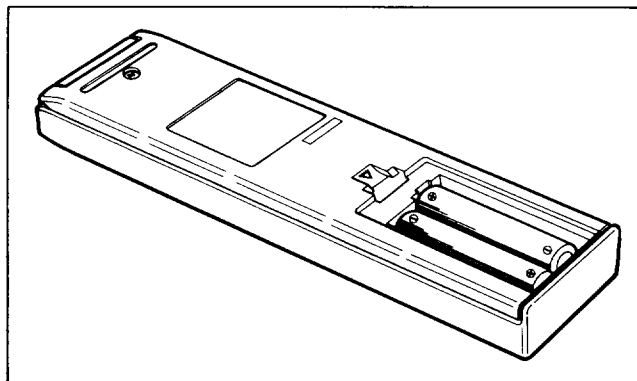
Aim the Remote Control Unit at the remote control receiver on the front panel of the VTR.



**Note:** The infrared rays will bounce off the walls and eventually reach the receiver on the VTR, but for best results transmit rays directly to the receiver.

### Power source of infrared remote control unit

The infrared remote control unit is powered by two batteries (size AA). The life of the batteries is about one year although it depends on the numbers of times the unit is used. Replace the batteries when operation is not possible or when the distance becomes too small.



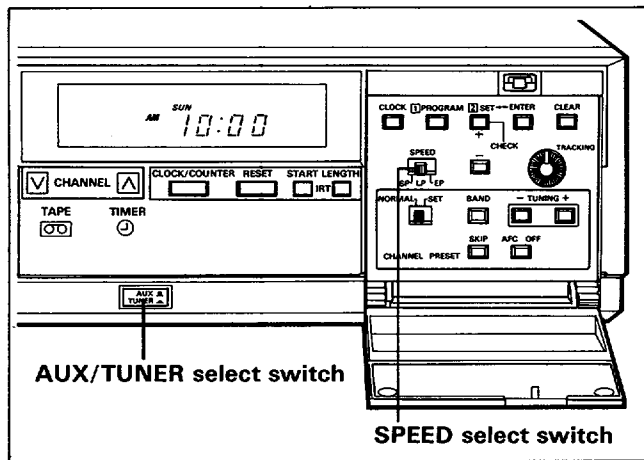
### To view a picture at twice normal speed

You can view a picture at twice normal speed in the forward direction by pressing the QUICK button during playback. Press PLAY button to return to normal playback, or the STOP button to enter the stop mode.

**Note:** Noise bands may appear during playback at twice normal speed. At that time turn TRACKING control slowly in either direction to eliminate them.

# TIMER RECORDING

The programmable electronic clock/timer permits the unattended recording of up to 3 preselected programs, plus one program on the same day of each week. It can be preset up to 14 days in advance to record your favorite programs. It turns the unit on and off and changes channels automatically.

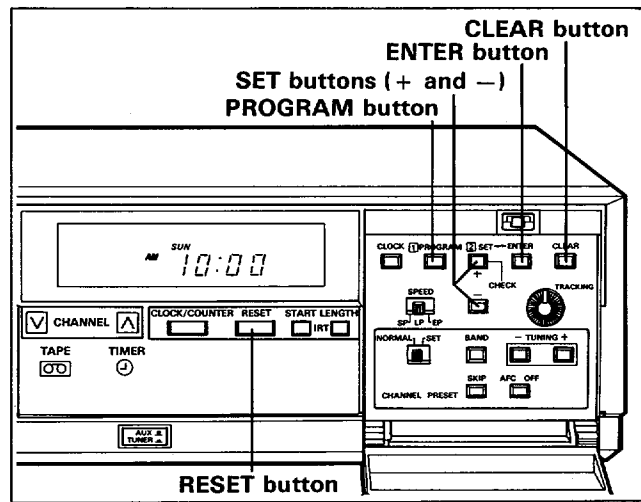


- You do not have to turn on the TV to make a recording because the VTR records TV programmes without the aid of your TV. Turn it on only when monitoring.
1. Turn power on.
  2. Insert the Cassette.
  3. Set the SPEED select switch to "SP", "LP" or "EP".  
**Note:** It is recommended to set to "SP" when recording a music program.
  4. Set the AUX/TUNER select switch to "TUNER".
  5. Set the program timer.  
"START (ON) TIME", "STOP (OFF) TIME", "DAY" etc. See below.
  6. Turn power off. Now recording will begin automatically at the start time.

**Note:**

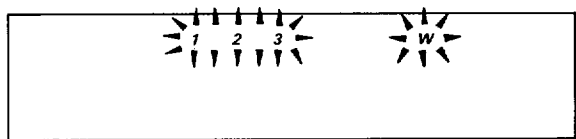
- It is not necessary to press PLAY and RECORD buttons.
- The TIMER indicator flashes to warn that recording will not occur because cassette has not been inserted. If the safety tab on the cassette has been removed, the VTR will automatically eject the cassette when placed in the Timer mode.

**Programming the timer for unattended recording**  
For unattended recording the timer needs to know what **day** to make the recording, the **time to start**, the **time to stop**, and the **channel to be recorded**.

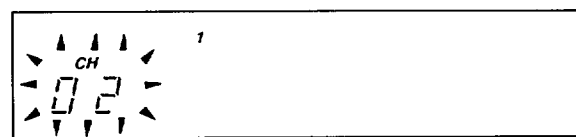


The timer is programmed using the PROGRAM, SET and ENTER buttons. The PROGRAM button selects the timer programming mode. The SET buttons advance the Program indicators, Channel, Day, Hours or Minutes for recording. The ENTER button stores them. The digits flash in sequence, so input the correct data to the flashing digits. When the ENTER button is pressed, the flashing digits will be stored in memory. If you input erroneous information by mistake when programming the timer, press the CLEAR button and input the correct information again.

1. Press the PROGRAM button.  
Program indicators (1 through 3 and W) flash to indicate which memory positions have not been programmed. If a memory has been programmed, its indicator will not flash.  
**Note:** You should determine which memory positions have not been programmed before entering new programming information. New information automatically erases previous programming.

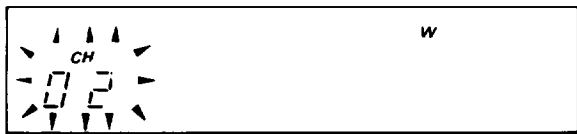


2. Press the SET button (+) repeatedly until the desired program indicator lights. Press the ENTER button when the desired program number is displayed.

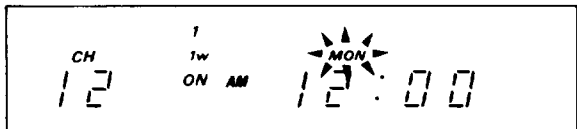


For example, diagram shows program "1" has been set.

To record on a specified day at the same time each week. Press the SET button (+) until the "W" indicator lights. Then press the ENTER button.

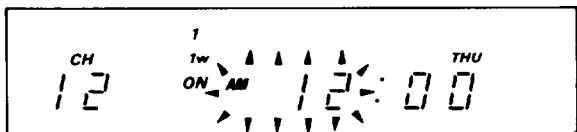


- Choose the channel to be recorded by pressing the SET (+ or -) or CHANNEL select button. Then press the ENTER button.



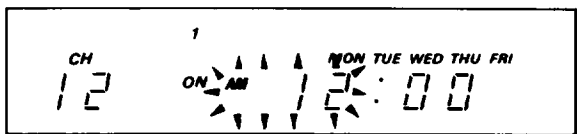
For example, diagram shows channel "12" has been set.

- Press the SET button (+ or -) to select the day of recording. Make sure desired Week indicator (1W or 2W) lights. Continuing forward will advance timer to Week two. Press the ENTER button after selecting the day of recording.

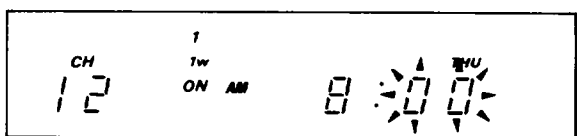


For example, diagram shows recording on Thursday within 1 week from today.

To record at the same time on Monday through Friday:  
Press the SET button (+ or -) until Monday through Friday indicators light, then press the ENTER button.

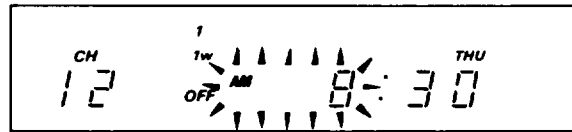


- Select the hour for recording to start by pressing the SET button (+ or -). Hold down button to advance rapidly. Press the ENTER button after selecting the hour for recording to start.



For example, the diagram shows "AM 8" hours has been set.

- Select the minutes for recording to start by pressing the SET button (+ or -). Hold down button to advance rapidly. Press the ENTER button after selecting the minute for recording to start.



For example, the diagram shows "30" minutes has been set.

- Select the hour and minute to stop recording in the same procedures described in steps 5 and 6. Be sure to press the ENTER button after selecting the minute.

Now one programming has been completed. Display shows the start time when pressing the ENTER button. After a few seconds the display shows stop time, the display returns to the clock time or counter together with letters "PROG" automatically.

"PROG" shows that timer has been programmed; it lights whenever the timer-programming is done regardless of whether the power ON/OFF. To set the next programme, repeat steps 1 through 7.

**Note:** If a power failure occurs and the clock display shows "--:--", programming information previously set is cleared. The programming information should be reset.

#### To clear a program

- Press the SET button (+) until desired program indicator lights. Then start time appears on the display.
- Press the CLEAR button.  
The display returns to the clock time or counter to show that the programming has been cleared. Be sure to press the CLEAR button while the display shows the start or stop time. The programming does not clear if the CLEAR button is pressed when the display returns to the clock time or counter.

#### To stop a timer recording while in progress

Press the POWER button and then press the STOP button within 10 seconds.  
The program that was being recorded will be erased from the timer's memory.

#### To check programming

Press the SET button (+).  
The program indicator "1" lights. If the program No. 1 has been already programmed, the "ON" indicator lights and the clock/timer display shows the starting time. Then the "OFF" indicator lights and the display automatically shows the time to stop recording in a few seconds with the channel number to be recorded lighting up. The display then automatically returns to the present time of day.



### Programming errors

- If you make an error during programming, press CLEAR button to return to the previous step and resume the programming.
- If programs overlap, the video deck will select the program with the earliest start time. When that program is over, the video deck will switch to the next program. If the start times are the same, the video deck will select the programs in numerical order.

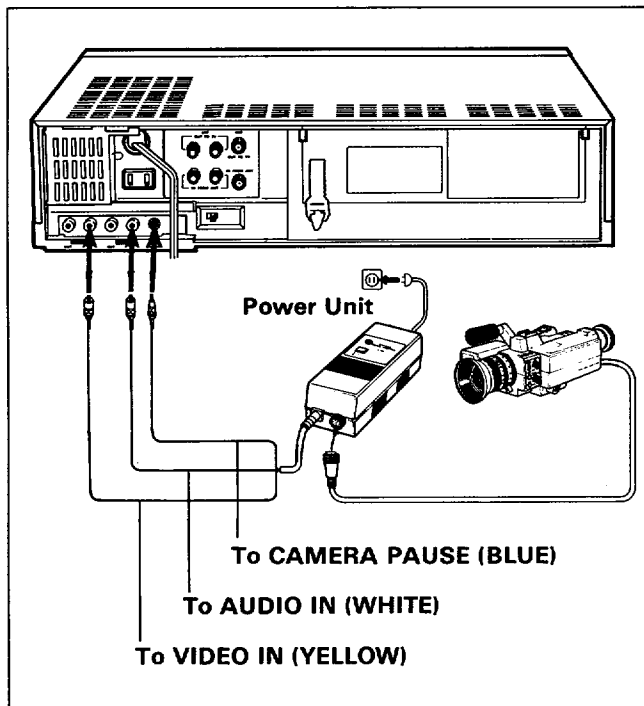
9. Press STOP button of video deck after pressing the start/stop switch on camera to stop recording.

**Note:** The start/stop switch on the PENTAX video camera can be used to start and stop the video deck. It has priority over the PAUSE button of the video deck. When the start/stop switch on camera is set to PAUSE, recording will not start when the PAUSE button of the video deck is released.

The start/stop switch on camera must be released in this case.

## RECORDING FROM A VIDEO CAMERA

You will need a Video Camera and Power Supply for Video camera. At first you must connect the Video Camera with Power Supply and then connect Power Supply with Video Deck. (Refer to the Instruction Manual of the Camera as well as these instructions.)



1. Turn on both POWER switches of Power Unit and video deck.
2. Insert cassette.
3. Set the SPEED select switch to "SP", "LP" or "EP".
4. Set the AUX/TUNER select switch to "AUX".
5. Adjust focus and white balance on camera. (Refer to Instruction Manual of video camera.)
6. Press RECORD button and while holding RECORD, press PLAY.
7. Press start/stop switch on camera. Recording begins.
8. Press start/stop switch on camera again to stop recording temporarily.

## HEAD CLEANING

- Picture playback may become blurred or be interrupted while the TV program received is clear. This does not mean that the recorded program has been erased.
- Dirt accumulated on the head after long periods of use causes this problem. In this case, head cleaning requiring highly technical care is necessary.
- For head cleaning, consult the nearest dealer or VTR Service Center for recommendations.



## PERIODIC MAINTENANCE

The Video Deck is a precision electromechanical device which will require periodic maintenance after a period of normal use. We expect that no maintenance other than head cleaning will be required during the warranty period by most users, unless the Deck is heavily used or seldom used. Normal maintenance is the responsibility of the user, although defective parts are covered during the warranty period. Consult your VTR Service Center to determine recommendations for normal maintenance based on your location, use patterns and machine age.

## PROBLEM GUIDE

PROBLEM	THINGS TO CHECK	SOLUTION
No power	<ul style="list-style-type: none"> <li>• Is power cord connected?</li> </ul>	<ul style="list-style-type: none"> <li>• Connect power cord with AC outlet.</li> </ul>
Timer recording is not possible.	<ul style="list-style-type: none"> <li>• Is the program timer set correctly?</li> <li>• Is the POWER switch set to "OFF"?</li> <li>• Is the record safety tab missing?</li> </ul>	<ul style="list-style-type: none"> <li>• Set the program timer correctly.</li> <li>• Set the POWER switch to "OFF".</li> <li>• Place cellophane tape over missing safety tab.</li> </ul>
REC mode cannot be engaged.	<ul style="list-style-type: none"> <li>• Is the record safety tab missing?</li> </ul>	<ul style="list-style-type: none"> <li>• Place cellophane tape over missing safety tab.</li> </ul>
Picture is poor on playback.	<ul style="list-style-type: none"> <li>• Is the TV channel selector on the proper channel?</li> <li>• Is the TV fine tuning set correctly?</li> </ul>	<ul style="list-style-type: none"> <li>• On playback, the TV channel selector should be on channel 3 or 4.</li> <li>• Fine tune your TV.</li> </ul>
Noise in picture on playback	<ul style="list-style-type: none"> <li>• Is Video Head clean?</li> </ul>	<ul style="list-style-type: none"> <li>• Head cleaning is necessary.</li> </ul>
No picture on playback	<ul style="list-style-type: none"> <li>• Is the TV set to the proper channel?</li> </ul>	<ul style="list-style-type: none"> <li>• Set to correct channel, CH3 or 4. (for your video channel)</li> </ul>
Playback picture is partially noisy.	<ul style="list-style-type: none"> <li>• Is the TRACKING control set to center position?</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust TRACKING control for better picture.</li> </ul>
TV program cannot be recorded.	<ul style="list-style-type: none"> <li>• Is the AUX/TUNER select switch set to "TUNER"?</li> </ul>	<ul style="list-style-type: none"> <li>• Set to "TUNER".</li> </ul>
Off-the-air TV programs cannot be seen.	<ul style="list-style-type: none"> <li>• Is connection correct?</li> <li>• Is the AUX/TUNER select switch set to "TUNER"?</li> </ul>	<ul style="list-style-type: none"> <li>• Connect correctly.</li> <li>• Set to "TUNER".</li> </ul>

## SPECIFICATIONS

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Recording:	Rotary two head Helical Scan Azimuth Recording
Video:	NTSC Color EIA Standard
Cassette:	VHS Type
Heads:	3 video heads: 2 for SP/LP/EP 1 for Special effect 1 Full track audio/video erase head 1 Combination head for control track, audio erase and audio record/play (3 heads/single housing)
Tape Speed:	33.35 mm/sec (SP), 16.67 mm/sec (LP), 11.12 mm/sec (EP)
Tape Width:	12.7 mm
RF Output:	Channel 3 or Channel 4
RF Input:	VHF 75 ohm, UHF 300 ohm
Tuning Range:	VHF LOW, CH2 ~ 6 (54 MHz — 88 MHz) VHF HIGH, CH7 ~ 13 (174 MHz — 216 MHz) VHF MID. CH A-2, A-1 and A ~ I (108 MHz — 174 MHz) CATV VHF SUPER CH J ~ W (216 MHz — 300 MHz) CATV UHF CHANNELS, 14 ~ 83 (470 MHz — 890 MHz)
Video Input:	1 — 2 Vp-p 75 ohm Unbalanced
Video Output:	1 Vp-p 75 ohm Unbalanced
Audio Input:	316 mV rms (-7.8 dB) 100 kohm
Audio Output:	316 mV rms (-7.8 dB) 600 ohm
Video Recording S/N:	Better than 46 dB (SP), Better than 43 dB (LP), Better than 40 dB (EP)
Horizontal Resolution:	240 lines (SP), 230 lines (LP), 230 lines (EP)
Audio Response:	50 Hz — 10 kHz (SP), 50 Hz — 7 kHz (LP), 100 Hz — 6 kHz (EP)
Audio S/N:	Better than 43 dB (SP), Better than 40 dB (LP), Better than 40 dB (EP)
Power Input:	AC 120V 60 Hz
Power Consumption:	36W Nominal
Cabinet Size:	17-1/8"(W) x 3-7/8"(H) x 12-1/16"(D) 43.5(W) x 9.9(H) x 31.3(D) cm
Weight:	17.2 lbs (7.8 kg)
Accessories:	1 — Coaxial cable with F-type connectors 1 — UHF twin lead 1 — Matching transformer 300 — 75 ohm 1 — Matching transformer 75 — 300 ohm 1 — Remote control unit 2 — Batteries

Design and Specifications subject to change without notice.

# **PENTAX**

**PENTAX CORPORATION.** 35 Inverness Drive East Englewood, CO 80112  
Service information : (303) 799-8000

**PENTAX CORPORATION.** 1101 Stewart Ave. Garden City, NY 11530  
Service information : (516) 222-0830

**PENTAX CORPORATION.** 350 East Devon Ave. Itasca, IL 60143  
Service information : (312) 250-9000

**PENTAX CORPORATION.** 8363 Reseda Blvd. Northridge, CA 91324  
Service information : (818) 701-5080

**1 Read Instructions** — All the safety and operating instructions should be read before the appliance is operated.



**2 Retain Instructions** — The safety and operating instructions should be retained for future reference.

**3 Heed Warnings** — All warnings on the appliance and in the operating instructions should be adhered to.

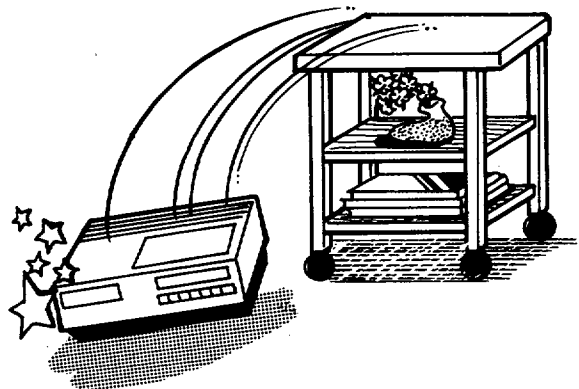
**4 Follow Instructions** — All operating and use instructions should be followed.

**5 Cleaning** — Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**6 Attachments** — Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

**7 Water and Moisture** — Do not use this video product near water — for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

**8 Accessories** — Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.



**9 Ventilation** — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

- d. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
- e. If the video product has been dropped or the cabinet has been damaged.
- f. When the video product exhibits a distinct change in performance — this indicates a need for service.

**20 Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

**21 Safety Check** — Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

## **IMPORTANT SAFEGUARDS**

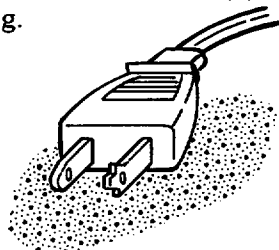
**Safety points you should know about your video product.**

**CAUTION:**

- \* Read all of these instructions.
- \* Save these instructions for later use.
- \* Follow all warnings and instructions marked on the video product.

**10 Power Sources** — This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

**11 Grounding or Polarization** — This video product is equipped with a polarized alternating-current plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

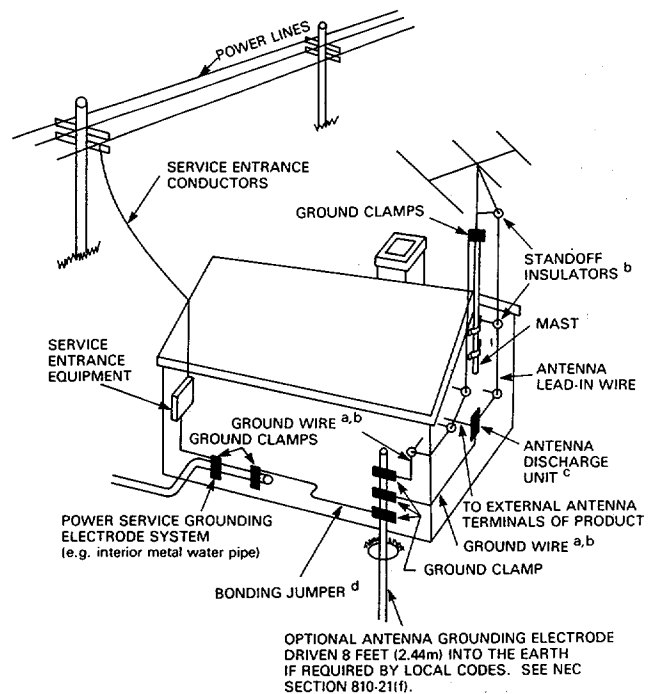


**12 Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

**12A Protective Attachment Plug** — The appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

**13 Outdoor Antenna Grounding** — If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See example below.

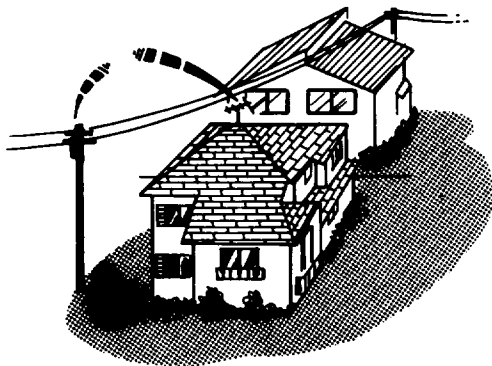
EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810 — "RADIO AND TELEVISION EQUIPMENT"



- a Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as ground wire.
- b Secure antenna lead-in wire and ground wires to house with stand-off insulators spaced from 4 ft (1.22 m) to 6 ft (1.83 m) apart.
- c Mount antenna discharge unit as close as possible to where lead-in enters house.
- d Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

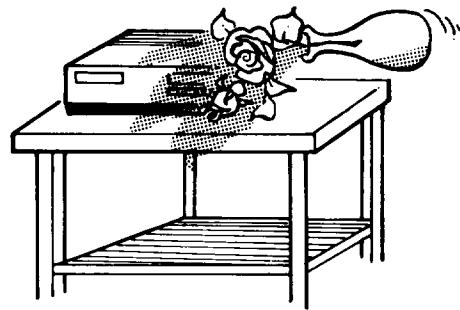
**14 Lightning** — For added protection for this video product receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

**15 Power Lines** — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.



**16 Overloading** — Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

**17 Object and Liquid Entry** — Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.



**18 Servicing** — Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**19 Damage Requiring Service** — Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the video product.
- c. If the video product has been exposed to rain or water.